

### **REMARKS**

Claims 1-10 are pending in the application. Claims 5 and 8-10 are withdrawn from consideration. Claims 1-4, 6, and 7 stand rejected. Claims 3, 4, 6, and 7 stand objected to. The Applicants herein cancel Claims 3, 4, and 6 without prejudice or disclaimer, and amend Claims 1, 2, 6, and 7 to clarify the scope of the instantly claimed subject matter. Claims 1, 2, 6, and 7, as amended, find support at pages 8, 12, 15, 17-20 of the as-filed specification, the Sequence Listing, and as-filed Claims 1, 2, 6, and 7. Accordingly, none of these amendments raise issues of new matter.

#### **Formal Matters:**

Claims 3 and 4 are objected to under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of the previous claim. As the Applicants herein cancel Claims 3 and 4, this objection is moot and should be withdrawn.

Claims 6 and 7 are objected to under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The Examiner indicates that the Applicants are required to cancel the claims, amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form. Applicants herein cancel Claim 6, and amend Claim 7 to make it an independent claim. Accordingly, these objections are now moot, and should be withdrawn.

#### **Objections and Rejections under 35 U.S.C. § 112:**

Claims 6 and 7 stand rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner argues that Claim 6 is indefinite because the phrase, "an immunomodulatory cytokine", is unclear. As the Applicants herein cancel Claim 6, this rejection is now moot. Accordingly, the Applicants respectfully request withdrawal of this rejection.

Claim 7 contains the trademark/trade name "rebetron". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. § 112, second paragraph. The Examiner states that the claim scope is uncertain, since the trademark or trade name cannot be used properly to identify any particular material or product. In response to this rejection, the Applicants herein amend Claim 7 to remove the recitation of "rebetron". Instead of rebetron, Claim 7, as amended, recites the following elements of Rebetron<sup>®</sup>, which are found in the PDR: the combination of ribavirin and interferon  $\alpha$ .

The Examiner also rejects Claim 7 as indefinite, because the agents "acylovir", "valacylovir", and "valganeciclovir" are not art-recognized medical agents for treatment, *i.e.*, they do not appear in the "Physician's Desk Reference" (PDR). The Applicants submit that "acylovir", "valacylovir", and "valganeciclovir" are not found in the PDR, because these agents are misspelled in Claim 7. The correct spelling for each of these agents is: acyclovir, valacyclovir, and valganciclovir. The Applicants further submit that acyclovir, valacyclovir, and valganciclovir are all disclosed in the PDR, and therefore are sufficiently definite terms to include in the instant claims. The specification, for example, at page 12, lines 25-28, shows the correct spelling of these three agents. The Applicants submit that these misspellings are inadvertent typographical errors. In view of all of these amendments to Claim 7, the Applicants respectfully submit that Claim 7, as amended, is definite under 35 U.S.C. § 112, second paragraph.

Claims 1-4, 6 and 7 stand rejected under 35 U.S.C. § 112, first paragraph, because the Examiner alleges that the specification, while being enabling for claims limited in scope to a method of treatment using a composition comprising a polypeptide of SEQ ID NO:1 or 2 (human IL-18 or murine IL-18), does not reasonably provide enablement for claims to a method of treatment using a composition comprising a polypeptide at least 90% identical to the amino acid sequence of SEQ ID NO:1 or 2. Claims 1-4, 6 and 7 are further rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The Applicants herein cancel Claims 3, 4, and 6 without prejudice or disclaimer. Moreover, the Applicants herein amend Claims 1, 2, and 7 to eliminate the language concerning "at least 90% identity". Therefore, Claims 1, 2, and 7, as amended, are limited to methods of treatment by administering either human or murine IL-18 (SEQ ID NO:1 and SEQ ID NO:2, respectively). These amendments to Claims 1, 2, and 7 render these rejections moot. Accordingly, the Applicants respectfully request reconsideration and withdrawal of Claims 1, 2, and 7, as amended, under 35 U.S.C. § 112, first paragraph.

Claims 3 and 4 stand further rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention. Specifically, the Examiner argues that, although Claims 3 and 4 claim methods of preventing the recited viral diseases, the specification contains no working examples to show such prevention of these viral diseases. The Applicants herein cancel Claims 3 and 4, thus rendering these rejections moot. Accordingly, the Applicants respectfully request withdrawal of the rejection of Claims 3 and 4 under 35 U.S.C. § 112, first paragraph.

Rejections over Prior Art:

Claims 1, 2, 6 and 7 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Ushio, *et al.*, EP 0 712 931 A2. Ushio, *et al.* disclose human IL-18 and murine IL-18 that are 100% identical to instant SEQ ID NOs:1 and 2, respectively. The Examiner further alleges:

Ushio, *et al.* teaches a methods of treating IFN- $\lambda$  susceptible diseases with the interferon-gamma production inducing polypeptides, or the interferon-gamma production inducing polypeptides in combination with one or more other biologically active substances such as IL-2, wherein the susceptible diseases include viral diseases such as hepatitis, herpes and AIDS (HIV) (page 11, the last paragraph to page 12, line 15).

While the Applicants cancel Claim 6 herein, they respectfully traverse these rejections of Claims 1, 2, and 7, as amended. For a reference to be anticipatory, it must be enabling. A disclosure is non-enabling if it "does not place the subject matter of the claims within 'the possession of the public.'" *In re LeGrice*, 133 U.S.P.Q. 365, 376-77 (C.C.P.A. 1962). Although the Applicants agree that Ushio, *et al.* discloses the sequences for both human and murine IL-18 (SEQ ID NOs:1 and 2, respectively), it does not enable the skilled artisan to use either of these proteins in the instantly claimed methods of specifically treating influenza virus, HIV, HSV, HPV, HAV, HBV, or HCV with human or murine IL-18 or combinations comprising human or murine IL-18. By contrast, the instant application provides suitable dosage ranges for administration on page 16, lines 29-31. Furthermore, in Examples 1-4 (pages 17-19), the instant application shows compelling *in vivo* data involving administering IL-18 to accepted animal models for influenza, HSV, influenza, and HBV. Furthermore, Examples 5 and 6 show synergistic effects of IL-18 and IL-12 in HBV animal models.

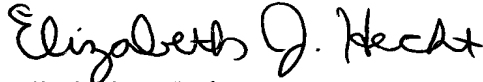
By contrast, Ushio, *et al.* offers no data whatsoever, either *in vitro* or *in vivo*, to show that any of these specifically claimed viruses can be treated with human or murine IL-18 or IL-18 combinations. The above-quoted disclosure that the Examiner from Ushio, *et al.* presents nothing more than a general invitation for further research. Although Ushio, *et al.* discloses that IL-18 induces IFN- $\lambda$  production, such an observation is true for many proteins that are not necessarily useful in treating viral diseases. For these reasons, the Applicants respectfully submit that Ushio, *et al.* fails to enable the instantly claimed methods of treatment. Therefore, under *In re LeGrice*, Ushio, *et al.* does not anticipate the instantly claimed invention, because it does not put the instantly claimed methods within "the possession of the public." Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1, 2, and 7 under 35 U.S.C. § 102(b).

The Applicants thank the Examiner for the Office Action, and they believe this response to be a full and complete response to such Office Action. Accordingly, favorable reconsideration and

U.S. Patent Appl'n. No.: 10/297,136  
Filing Date: 02 December 2002

allowance of the pending claims is earnestly solicited. If it would expedite the prosecution of this application, the Examiner is invited to confer with the Applicants' undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink, reading "Elizabeth J. Hecht". The signature is written in a cursive style with a large, stylized "E" and "H".

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